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EXAMINER	
ISOM, JOHN W	
ART UNIT	PAPER NUMBER
2447	
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05/25/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,380	BUESGEN ET AL.	
	Examiner	Art Unit	
	John Isom	2447	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-27,31-33 and 38-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-27,31-33 and 38-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In the amendment received 02/02/2010 (the "amendment"), Applicant has amended claims 21, 23, 25, 27, 31 and 38-42.

Claims 21-27, 31-33 and 38-42 are pending.

Response to Arguments

2. Applicant's arguments in the request, with regard to the rejection of claims 21-27, 33, 38 and 40-42 under 35 U.S.C. 102(b) as being anticipated by Allon et al. (US Pat. No. 5539883) ("Allon"), have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of a newly found prior art reference(s).

In the amendment, Applicant argues that the claims at issue are patentable over the cited references, for one or more of at least the following reasons:

(A) Allon does not disclose "replacing the first drive device with a replacement drive device by connecting the replacement drive device to the first node" as in claim 21, at least in part because "the Allon reference does not relate to actual physical replacement of devices" (page 8, 4th ¶); and

(B) Allon does not disclose "operating the replacement drive device to identify the first node to which the replacement drive is assigned and to identify other devices including the second device" as in claim 21 (page 8, last ¶ – page 9, 1st ¶).

In response, the examiner respectfully traverses, and offers the following evidence and argument in support of the traversal:

The claims at issue are unpatentable over the cited references, for the new grounds of rejection below, and for the following reasons:

(A) Allon teaches "replacing the first drive device with a replacement drive device by connecting the replacement drive device to the first node" as in claim 21; and, Allon relates to actual physical replacement of devices; and

(B) Allon teaches "operating the replacement drive device to identify the first node to which the replacement drive is assigned and to identify other devices including the second device" as in claim 21.

Each of these reasons is individually considered under a corresponding header as follows.

(A) Allon teaches "replacing the first drive device with a replacement drive device by connecting the replacement drive device to the first node" as in claim 21; and, Allon relates to actual physical replacement of devices

Allon discloses computers in a network logically linked in a hierarchical tree structure (column 4, lines 16-31); a computer comprising a means for storing information (column 6, lines 14-28); and "[a] computer program product, for use with a computer, comprising: a recording medium" (column 16, lines 46-48). In the hierarchical tree structure, a dead node is detected, and a new node is added, because

nodes fail (column 8, lines 34-39). When a computer is added to the network, the computer looks for a parent computer (column 8, lines 54-55; column 7, lines 1-6). Each node receives information from the nodes to which it is linked in the tree structure. Information on nodes in another sub-tree can reach any node (column 10, lines 25-34).

In this disclosure of Allon, the *parent computer* and the *nodes to which each node is linked*, teach "the first node". The *new node* teaches "the replacement drive device". The disclosure that *a new node is added because nodes fail*, teaches "replacing the first drive device with a replacement drive device". The disclosures that *when a computer is added to the network the computer looks for a parent computer*, and that *each node is linked to other nodes in the tree structure*, teach "connecting the replacement drive device to the first node". Thus, Allon teaches "replacing the first drive device with a replacement drive device by connecting the replacement drive device to the first node" as in claim 21.

Further, in the above-given disclosure of Allon, the disclosures that *a new node is added because nodes fail*, and that *a computer is added to the network*, disclose "actual physical replacement of devices". Thus, Allon relates to actual physical replacement of devices.

(B) Allon teaches "operating the replacement drive device to identify the first node to which the replacement drive is assigned and to identify other devices including the second device" as in claim 21

In the above-given disclosure of Allon, *the added computer* teaches "the replacement drive device". The *network logically linked in a hierarchical tree structure*, teaches "the nodes to which the replacement drive is assigned". The disclosure that *the computer looks for a parent computer*, teaches "operating the replacement drive device to identify a first of the nodes to which the replacement drive is assigned". The disclosures that each node *receives information from the nodes to which it is linked*, and that *information on nodes in another sub-tree can reach any node*, imply "to identify other devices including the second device".

Thus, Allon teaches "operating the replacement drive device to identify the first node to which the replacement drive is assigned and to identify other devices including the second device" as in claim 21.

Conclusion

It is shown above that—

(A) Allon teaches "replacing the first drive device with a replacement drive device by connecting the replacement drive device to the first node" as in claim 21; and, Allon relates to actual physical replacement of devices; and

(B) Allon teaches "operating the replacement drive device to identify the first node to which the replacement drive is assigned and to identify other devices including the second device" as in claim 21.

For these reasons, and the new grounds of rejection below, the examiner concludes that the claims at issue are unpatentable over the cited references. Accordingly, the new grounds of rejection is made, below.

Claim Objections

3. Claims 21 and 41 are objected to because of the following informalities:

- In the 7th line of claim 21, please amend as follows: "the first drive device".
- In the 11th line of claim 21, please amend as follows: "the replacement drive device is".
- In the 11th line of claim 21, please amend as follows: "the replacement drive device is".
- In the 11th line of claim 21, the examiner suggests amending as follows: "is ~~assigned~~ connected and".
- In the 16th line of claim 21, please amend as follows: "first node [[and]], and".
- In the 9th line of claim 41, please amend as follows: "~~a first of the devices~~ performing, by a first of the devices, a series".
- In the 16th line of claim 41, please amend as follows: "devices[[,]];".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims **21-27 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Allon et al.** (US Pat. No. 5539883) ("Allon") in view of **King, et al.** (US Pub. No. 20040162945) ("King").

With regard to claim **21**, Allon teaches: In an automation network comprising a plurality of devices, a method for replacing a first drive device connected to a first node involving identifying an order of devices in the network, wherein the network contains a number of nodes, and wherein each of the nodes has a number of connections for interconnecting the nodes and the devices, the method comprising:

providing a second device with data memory or storage in which a relationship or order of the drive device with respect to at least the second device is stored (i.e., computers in a network are logically linked in a hierarchical tree structure (column 4, lines 16-31). Each of the computers comprises a means for storing information (column 6, lines 14-28) which may be a recording medium (column 16, lines 46-48). The information stored in each computer contains a number of entries, each entry containing information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored, and the rank of the particular computer, logically linked to the computer in which the information is stored, from which the entry was last received (column 5, lines 22-32));

replacing the first drive device with a replacement drive device by connecting the replacement drive device to the first node

(i.e., in the hierarchical tree structure, a dead node is detected, and a new node is added, because nodes fail (column 8, lines 34-39). When a computer is added to the network, the computer looks for a parent computer (column 8, lines 54-55; column 7, lines 1-6). Each node receives information from the nodes to which it is linked in the tree structure. Information on nodes in another sub-tree can reach any node (column 10, lines 25-34));

operating the replacement drive device to identify the first node to which the replacement drive is assigned

(i.e., when a computer is added to the network, the computer looks for a parent computer (column 8, lines 54-55; column 7, lines 1-6))

and to identify other devices including the second device

(i.e., each node receives information from the nodes to which it is linked in the tree structure. Information on nodes in another sub-tree can reach any node (column 10, lines 25-34));

operating the replacement drive device to receive information from the second device

(i.e., each node receives information from the nodes to which it is linked in the tree structure. Information on nodes in another sub-tree can reach any node (column 10, lines 25-34)).

Allon does not disclose, but King teaches:

wherein, with information received from the second device, the replacement drive device determines (i) the number of connections of the first node and (ii) a predefined hierarchy of the connections and (iii) the connection with which the replacement drive device is connected to the first node and, and (iv) for the first node, other connections which are connected to other nodes or others of the plurality of devices (i.e., in an apparatus including a hierarchy of field replaceable units (FRUs), each FRU in the hierarchy may have a number of subsidiary FRUs, each of a particular type. A FRU includes stored FRU identity data, relating to or describing the FRU itself, and subsidiary FRU data that is indicative of at least the number and type of any subsidiary FRUs that may be immediately below the in the hierarchy. The apparatus is operable to provide a consolidated version of the FRU identity data and subsidiary FRU data stored by the various FRUs in the hierarchy (Figure 6; [0008]). For example, in a system 10, a chassis 15 receives 910 an initial request from a service processor for consolidated FRU data, and forwards 940 the request to each of its subsidiary FRUs including blades 40 (Figure 10; [0108]), which in turn forwards 940 the request for FRU data to its subsidiary FRUs disk unit 515 and RAM 540, each of which responsively returns 960 its FRU data 710 to the blades 40 ([0110]), which in turn returns 960 to chassis 15 the blades' consolidated FRU data 710 which comprises not only the FRU data 710 stored within blade 40 itself but also the FRU data 710 just received 950 from its subsidiary FRUs disk unit 515 and RAM 40 ([0111])).

Based on Allon in view of King, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the

teaching of King with the claimed subject matter as taught by Allon, in order to help to isolate a fault in the apparatus (King at [0009]).

Allon further teaches:

establishing a relationship between the devices in the network, on the basis of the connection hierarchy predefined for the first node, and of the other connections to the devices or other ones of the nodes as determined by the replacement drive device (i.e., each computer can form an upward link to a computer of lower rank, and can form a downward link to each of a number of computers of higher rank, to form the tree structure (column 7, lines 1-6; column 4, lines 42-47)).

With regard to claim **22**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches: executed by each of the devices (i.e., steps are taken by each node in the network tree to send and receive information concerning the placement of each node in the network tree (column 6, lines 14-43)).

With regard to claim **23**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches:

wherein by the step of establishing a relationship includes determination of a first of said other devices another device is established as an upstream neighbor and a second of said other devices is established as a downstream neighbor for of the

replacement drive devices

(i.e., the network tree building process is executed by each node in the network to determine its place in the network as a downstream or upstream node (col. 7 lines 1-18)).

Therefore, the limitations of claim 23 are rejected in the analysis of claim 21, and the claim is rejected on that basis.

With regard to claim **24**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches:

wherein each step of the method is repeated periodically

(i.e., the periodic distribution of the network tree information across the network, is used by each node to determine its placement in the network as well as the placement and status of all other nodes in the network, col. 4 lines 15-31, col. 5 lines 12-21 and lines 62-67).

Therefore, the limitations of claim 24 are rejected in the analysis of claim 21, and the claim is rejected on that basis.

With regard to claim **25**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches:

wherein the recited steps are repeated whenever any one of said other devices is no longer connected to the network

(i.e., the network tree maintenance process takes place to recognize dead or new nodes on the network, col. 8 lines 35-59).

Therefore, the limitations of claim 25 are rejected in the analysis of claim 21, and the claim is rejected on that basis.

With regard to claim **26**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches:

wherein the recited steps are repeated whenever a new device is connected to the network

(i.e., the network tree maintenance process takes place to recognize dead or new nodes on the network, col. 8 lines 35-59).

Therefore, the limitations of claim 26 are rejected in the analysis of claim 21, and the claim is rejected on that basis.

With regard to claim **27**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches:

wherein the recited steps are repeated whenever any one of said other devices is replaced by a new device

(i.e., the network tree maintenance process takes place to recognize dead or new nodes on the network as well as replacing and rebooting a node, col. 8 lines 21-26 and 35-59).

Therefore, the limitations of claim 27 are rejected in the analysis of claim 21, and the claim is rejected on that basis.

With regard to claim **33**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon further teaches:

wherein the method is executed by a computer program product (column 16, lines 46-48).

Therefore, the limitations of claim 33 are rejected in the analysis of claim 21, and the claim is rejected on that basis.

6. Claims **31, 32 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Allon in view of King, and further in view of **Liu et al.** (U.S. Pat. No. 6574664) ("Liu").

With regard to claim **31**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon in view of King does not disclose, but Liu teaches:

wherein determination of connections between the first node and other nodes is performed by the MAC addresses
(i.e., a discovery procedure utilizes MAC addresses to discover nodes or devices connected to one another on a network (column 2, lines 23-34)).

Based on Allon in view of King and further in view of Liu, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was

made, to combine the teaching of Liu with the claimed subject matter as taught by Allon in view of King, in order to provide IP and MAC addresses of devices on a network, to application programs (Liu at column 2, lines 35-45).

With regard to claim **32**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon in view of King does not disclose, but Liu teaches:

wherein the step of establishing a relationship includes determining IP addresses of the other devices

(i.e., a local IP address procedure discovers IP addresses of devices on a local network, and stores the IP addresses (column 2, lines 23-51)).

Based on Allon in view of King and further in view of Liu, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Liu with the claimed subject matter as taught by Allon in view of King, in order to perform more complex operations with devices on the network (Liu at column 2, lines 1-12, and column 1, lines 33-47).

With regard to claim **39**, Allon in view of King teaches: The method according to claim 21 (see discussion above). Allon in view of King does not disclose, but Liu teaches:

wherein the network is an Ethernet containing personal computers or peripherals as devices

(i.e., the network can utilize any type of network topology, and preferably Ethernet (column 3, lines 33-53)).

Based on Allon in view of King and further in view of Liu, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Liu with the claimed subject matter as taught by Allon in view of King, in order to have a network composed of a large number of addressable devices (Liu at column 3, lines 54-56).

7. Claim **38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Allon in view of King, and further in view of **Talagala et al.** (U.S. Pub. No. 20020162075) ("Talagala").

With regard to claim **38**, Allon in view of King teaches: The method according to claim 21 (see discussion above). King further teaches:

applied to an automation system containing controls

(i.e., a switching and service controller (SSC) 52 ([0042])),

operator units

(i.e., a user may run a configuration or set-up utility program on a service processor ([0115]) of the SSC ([0045])),

drives

(515 in Figure 6)

as the devices.

Allon in view of King does not disclose, but Talagala teaches:

actuators as the devices

(i.e., a typical integrated disk controller may control the actuator and other internal components of a disk drive when writing data to or reading data from the disk ([0042])).

Based on Allon in view of King and further in view of Talagala, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Talagala with the claimed subject matter as taught by Allon in view of King, in order to protect against data loss (Talagala at [0055]).

8. Claim **40** is rejected under 35 U.S.C. 103(a) as being unpatentable over Allon in view of King, and further in view of **Root et al.** (U.S. Pub. No. 20020050737) ("Root").

With regard to claim **40**, Allon in view of King teaches: The method according to claim 21 (see discussion above).

Allon in view of King does not disclose, but Root teaches:

applied to a network installed in a rail transport system containing traction vehicles and cars as the devices

(i.e., an electropneumatic (EP) train set-up initialization process consists of establishing or confirming the identity of all trainline devices, i.e., locomotives or cars, as well as the position and orientation of all EP equipped locomotives and cars. It also includes assignment of unique network addresses, collection of device information and downloading configuration information (Figure 6; [0047], [0023])).

Based on Allon in view of King and further in view of Root, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was

made, to combine the teaching of Root with the claimed subject matter as taught by Allon in view of King, in order to enhance safety (Root at [0063]).

9. Claims **41 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Allon in view of Root and further in view of King.

With regard to claim **41**, Allon teaches: In an reconfigurable network comprising a plurality of devices, a method for identifying an order of devices in the network thereby enabling determination of relative spatial arrangements among the devices, wherein the network contains a number of nodes, and wherein each of the nodes has a number of connections for interconnecting the nodes and the devices, the method comprising:

configuring the network according to a first hierarchical arrangement of the connections which establishes relationships among the nodes
(i.e., computers in a network are logically linked in a hierarchical tree structure (column 4, lines 16-31). For each of the computers, a link to a computer of lower rank is a link to a parent which is higher up in the tree, and a link to each of computers of higher rank is a link to a child which is lower down in the tree (column 7, lines 1-6; column 4, lines 16-31)).

Allon does not disclose, but Root teaches:

configuring the network according to a first hierarchical arrangement of the connections which establishes relationships among the nodes determinative of the relative spatial arrangements among the devices
(i.e., an electropneumatic (EP) train set-up initialization process consists of establishing

or confirming the identity of all trainline devices, i.e., locomotives or cars, as well as the position and orientation of all EP equipped locomotives and cars. It also includes assignment of unique network addresses, collection of device information and downloading configuration information (Figure 6; [0047], [0023])).

Based on Allon in view of Root, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was made, to combine the teaching of Root with the claimed subject matter as taught by Allon, in order to enhance safety (Root at [0063]).

Allon further teaches:

a first of the devices performing a series of determinations including:

determining a first of the nodes to which it is assigned (i.e., when a computer is added to the network, the computer looks for a parent computer (column 8, lines 54-55; column 7, lines 1-6)),

determining other devices upstream or downstream from the first device (i.e., information stored in each computer contains a number of entries, each entry containing information regarding the number of links in the tree separating a particular computer from the computer in which the information is stored (column 5, lines 22-32)).

Allon in view of Root does not disclose, but King teaches:

determining the number of connections of the first node, the first hierarchical arrangement of the connections and nodes, and the connection with which the device is connected to the first node

(i.e., in an apparatus including a hierarchy of field replaceable units (FRUs), each FRU in the hierarchy may have a number of subsidiary FRUs, each of a particular type. A FRU includes stored FRU identity data, relating to or describing the FRU itself, and subsidiary FRU data that is indicative of at least the number and type of any subsidiary FRUs that may be immediately below the in the hierarchy. The apparatus is operable to provide a consolidated version of the FRU identity data and subsidiary FRU data stored by the various FRUs in the hierarchy (Figure 6; [0008])),

and

determining for the first node other connections which are connected to other nodes or devices

(i.e., for example, in a system 10, a chassis 15 receives 910 an initial request from a service processor for consolidated FRU data, and forwards 940 the request to each of its subsidiary FRUs including blades 40 (Figure 10; [0108]), which in turn forwards 940 the request for FRU data to its subsidiary FRUs disk unit 515 and RAM 540, which responsively return 960 their FRU data 710 to the blades 40 ([0110]), which in turn returns 960 to chassis 15 the blades' consolidated FRU data 710 which comprises not only the FRU data 710 stored within blade 40 itself, but also the FRU data 710 just received 950 from its subsidiary FRUs disk unit 515 and RAM 40 ([0111])).

Based on Allon in view of Root and further in view of King, it would have been obvious to one having ordinary skill in the art at the time the Applicant's invention was

made, to combine the teaching of King with the claimed subject matter as taught by Allon in view of Root, in order to help to isolate a fault in the apparatus (King at [0009]).

Allon also teaches:

determining

the first hierarchical arrangement of the connections and nodes, and the

connection with which the device is connected to the first node

(i.e., this node stores the rank of each of other nodes linked to this node (column 5, lines 22-32)).

Allon further teaches:

acquiring, by the first device, in accord with the first hierarchical arrangement relationships among nodes and connections to which other devices are connected (i.e., each computer can form an upward link to a computer of lower rank, and can form a downward link to each of a number of computers of higher rank, to form the tree structure (column 7, lines 1-6; column 4, lines 42-47)).

With regard to claim **42**, Allon in view of Root and further in view of King teaches: The method according to claim 41 (see discussion above). Root further teaches:

wherein the network comprises a plurality of computer devices each positioned on a vehicle or car in a transport arrangement

(i.e., an integrated processor module IPM 27 may be integrated with a distributed power DP 14 to communicate via a radio module 33 to other locomotives in the consist and distributed throughout the train (Figures 3-5; [0031], [0030]); a connection between the

IPM 27, a brake valve 26 and an electropneumatic control unit 20 is by a common bus which may be an AAR standard LonWork Network wherein each of the modules is a node on the neural network ([0032]); a car ID node 45 is shown as a node on the network and is part of the EP-60 system ([0033])).

Therefore, the limitations of claim 42 are rejected in the analysis of claim 41, and the claim is rejected on that basis.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Sherwood et al. (US Pat. No. 6098006) teaches a locomotive control unit having portions interconnected by an Echelon LonWorks Network. The system has the capability of communicating with electropneumatic controls to each of individual cars through an EP router. Intercommunication of line replaceable units allows communication between the line replaceable units or modules and allows a backup or redundancy of one unit for another (Figure 4; column 7 line 58 – column 8 line 5).
- Fuchs (US Pat. No. 5936539) teaches a docking station which provides, in addition to selective coupling to a portable monitor and apparatus for transferring patient data between the portable monitor and the docking station, a memory for storing network related information and transferring the network related information to the portable monitor when it is coupled to the

docking station (Abstract). In one embodiment, a docking station 110 includes a data storage element, e.g., a non-volatile memory 429, which stores the network related information therein (Figures 4 and 1; column 6 line 59 – column 7 line 15).

- Brown et al. (US Pub. No. 20020023181) teaches devices defined in a service hierarchy by nodes, or objects 312 in the service hierarchy. Dependencies between individual devices 312 such as devices D0 and D1 and a service 310 are represented. The service hierarchy can be derived automatically (Figure 9; [0083]).
- Ali et al. (US Pat. No. 6144900) teaches a linking process which allows a head-end unit (HEU) of a railroad train to determine the sequence of cars in the train using wireless links between nodes on the cars (Figures 8, 10 and 11; Abstract).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Isom whose telephone number is (571)270-7203. The examiner can normally be reached on Monday through Friday, 9:30 a.m. to 6:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Hwang can be reached on (571)272-4036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. I./
Examiner, Art Unit 2447
5/12/2010

/Joon H. Hwang/
Supervisory Patent Examiner, Art Unit 2447